

WHAT IS CLAIMED IS:

1 1. A method of extracting from an input image a graphical bar code
2 containing graphically encoded information, comprising:
3 trimming non-graphical bar code regions from the input image based upon
4 estimated position coordinates for a detected graphical bar code candidate to produce
5 a trimmed graphical bar code candidate for decoding.

1 2. The method of claim 1, further comprising cropping the input image
2 before trimming based upon estimated position coordinates for a detected graphical
3 bar code candidate to produce an inclusive image region encompassing the detected
4 graphical bar code.

1 3. The method of claim 1, further comprising computing the angular
2 orientation of the detected graphical bar code candidate.

1 4. The method of claim 3, wherein the non-graphical bar code regions are
2 trimmed based upon intensity histogram profiles obtained by summing intensity
3 values along orthogonal axes corresponding to the computed angular orientation of
4 the detected graphical bar code candidate.

1 5. The method of claim 4, wherein the non-graphical bar code regions are
2 trimmed based upon application of a threshold to the intensity histogram profiles.

1 6. The method of claim 4, wherein the non-graphical bar code regions are
2 trimmed based upon a comparison of expected graphical bar code dimensions with
3 the intensity histogram profiles.

1 7. The method of claim 3, further comprising de-skewing the detected
2 graphical bar code candidate before the non-graphical bar code regions are trimmed.

1 8. The method of claim 1, further comprising rotating the input image and
2 processing the rotated input image to detect a graphical bar code candidate in
3 response to a failure to detect a graphical bar code candidate in the input image
4 before rotation.

1 9. The method of claim 1, further comprising detecting a graphical bar
2 code candidate based upon a second training sample in response to a failure to detect
3 a graphical bar code candidate in the input image based upon a first training sample.

1 10. The method of claim 9, wherein the second training sample is a rotated
2 version of the first training sample.

1 11. The method of claim 1, further comprising extracting a second
2 graphical bar code candidate detected in the input image in response to a
3 determination that a first extracted graphical bar code candidate does not correspond
4 to the graphical bar code.

1 12. The method of claim 1, further comprising resolution scaling the
2 trimmed graphical bar code candidate.

1 13. A system for extracting from an input image a graphical bar code
2 containing graphically encoded information, comprising a graphical bar code
3 extractor configured to:

4 trim non-graphical bar code regions from the input image based upon
5 estimated position coordinates for a detected graphical bar code candidate to produce
6 a trimmed graphical bar code candidate for decoding.

1 14. The system of claim 13, wherein the graphical bar code extractor is
2 configured to crop the input image before trimming based upon estimated position
3 coordinates for a detected graphical bar code candidate to produce an inclusive
4 image region encompassing the detected graphical bar code.

1 15. The system of claim 13, wherein the non-graphical bar code regions are
2 trimmed based upon intensity histogram profiles obtained by summing intensity
3 values along orthogonal axes corresponding to a computed angular orientation of the
4 detected graphical bar code candidate.

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1 16. The system of claim 13, wherein the graphical bar code extractor is
2 configured to de-skew the detected graphical bar code candidate before the non-
3 graphical bar code regions are trimmed.

1 17. The system of claim 13, wherein the graphical bar code extractor is
2 configured to rotate the input image and process the rotated input image to detect a
3 graphical bar code candidate in response to a failure to detect a graphical bar code
4 candidate in the input image before rotation.

1 18. The system of claim 13, wherein the graphical bar code extractor is
2 configured to detect a graphical bar code candidate based upon a second training
3 sample in response to a failure to detect a graphical bar code candidate in the input
4 image based upon a first training sample.

1 19. The system of claim 13, wherein the graphical bar code extractor is
2 configured to extract a second graphical bar code candidate detected in the input
3 image in response to a determination that a first extracted graphical bar code
4 candidate does not correspond to the graphical bar code.

1 20. A computer program residing on a computer-readable medium and
2 comprising computer-readable instructions for causing a computer to:

3 trim non-graphical bar code regions from the input image based upon
4 estimated position coordinates for a detected graphical bar code candidate to produce
5 a trimmed graphical bar code candidate for decoding.

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